74. A variable phase shifter according to claim 73 wherein the coating has been formed by a process of anodisation.

75. A variable phase shifter according to claim 74 wherein the coating has been formed by a process of hard anodisation.

76. A variable phase shifter according to claim 73 wherein the signal conductor with the oxide coating is formed from Aluminium or an alloy thereof.

77. A variable phase shifter according to claim 73 wherein at least one of the signal conductors has a lubricating coating formed on a surface thereof.

78. A variable phase shifter according to claim 77 wherein the lubricating coating is formed on top of the oxide coating.

79. A variable phase shifter according to claim 78 wherein the lubricating coating is formed by spray-coating.

80. A variable phase shifter according to claim 73 wherein the first and second signal conductors have opposed substantially planar coupling surfaces.

81. A variable phase shifter according to claim 80 wherein the first signal conductor has a pair of electrically parallel arms which each have substantially planar coupling surfaces

which are arranged on opposite sides of the second signal conductor and which lie substantially parallel with each other.

82. A variable phase shifter according to claim 73 further comprising a third signal conductor, wherein the second signal conductor has a first arm coupled to the first signal conductor and a second arm coupled to the third signal conductor whereby the second signal conductor provides a transmission path between the first and third signal conductors, and wherein the second signal conductor and the first and third signal conductors are relatively moveable to vary the physical length of the transmission path.

83. A variable phase shifter according to claim 82 wherein the first and second arms of the third signal conductor extend in substantially parallel directions.

84. A variable phase shifter according to claim 73 wherein the second signal conductor is separated from the first signal conductor by a dielectric whereby the first and second signal conductors are capacitively coupled.

85. A variable phase shifter according to claim 84 wherein the dielectric comprises a solid or liquid dielectric material.

86. A variable phase shifter according to claim 85 wherein the dielectric comprises a dielectric coating on the first and/or the second signal conductor.

87. A variable phase shifter according to claim 86 wherein the dielectric coating is formed by spray-coating.

88. A variable phase shifter according to claim 85 wherein the dielectric material is in contact with both signal conductors whereby the dielectric material provides a sliding bearing surface when the signal conductors are relatively moved.

89. A variable phase shifter according to claim 73, wherein the phase shifter is dimensioned to provide a variable phase shift for signals in a wavelength band having a lower limit equal to or greater than 400 MHz, and an upper limit equal to or less than 3 GHz.

90. A variable phase shifter according to claim 89, wherein the phase shifter is dimensioned to provide a variable phase shift for signals in a wavelength band having a lower limit equal to or greater than 800MHz, and an upper limit equal to or less than 2.5 GHz.

91. A power splitter/combiner comprising three or more signal terminals and a variable phase shifter according to claim 73 coupled between two of the signal terminals.

92. A power splitter/combiner according to claim 91 further comprising an impedance matcher coupled between two of the signal terminals.

93. A phased array antenna comprising at least two radiating elements; and a feed network for feeding relatively phase-shifted signals to the radiating elements, wherein the feed network comprises one or more variable phase shifters according to claim 73.

94. A cellular telecommunications system comprising a phased array antenna according to claim 93.

95. A method of manufacturing a variable phase shifter, the method comprising the steps of:

i) arranging first and second coupled signal conductors to provide

a transmission path through the phase shifter, the signal conductors being relatively movable to vary the physical length of the transmission path; and

ii) forming an oxide coating on a surface of at least one of the signal conductors.

96. A method according to claim 95 wherein step ii) comprises forming the oxide by a process of anodisation.

97. A method according to claim 96 wherein step ii) comprises forming the oxide by a process of hard anodisation.

98. A method according to claim 97 wherein the anodisation process is performed at a temperature below 5 degrees Celcius.

99. A method according to any one of claim 95 wherein the anodisation process comprises immersing the conductor in an electrolyte and passing a current through the conductor with a current density greater than 2 amps /dm^2.

100. A method according to any one of claim 95 further comprising the step of forming a lubricating coating on a surface of at least one of the signal conductors.

101. A method according to claim 100 wherein the lubricating coating is formed on top of the oxide coating.

102. A method according to claim 101 wherein the lubricating coating is formed by spray-coating.

103. A variable phase shifter manufactured by the method of claim 95.